What is claimed is:

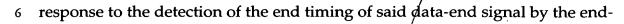
SUM 18 7

1. A transceiver circuit of a network node for converting a signal

- 2 received from a transmission medium to a decoded/signal that can be
- 3 recognised by a higher layer and transmitting packets received from said
- 4 higher layer to said transmission medium, characterised by:
- 5 selector circuitry; and
- 6 control circuitry for controlling the selector circuitry for supplying the
- 7 decoded signal to said higher layer and supplying, instead of said decoded
- 8 signal, an idle signal to said higher layer for a predefined time interval which
- 9 starts at the end timing of a packet transmitted from said higher layer to said
- transmission medium, said idle signal indicating that the network node is in an
- 11 idle state.
- 2. The transceiver circuit of claim 1, characterised in that said control
 - circuitry is responsive to end of said predefined time interval for supplying said
- 3 decoded signal to said higher layer, instead of said simulated idle signal.
- 3. The transceiver circuit of claim 1 er-2, characterised in that said
- 2 predefined time interval is equal to a turnaround time of said transmission
- 3 medium.
- 4. The transceiver circuit of claim 1, 2 or 3, characterised in that said
- 2 control circuitry is configured to detect a data end message as an indication
- 3 of the end of transmission of said packet.
 - 5. The transceiver circuit of claim 1, 2, 3 or 4, characterised in that
- said transmission medium is a serial bus and that a serial to parallel converter

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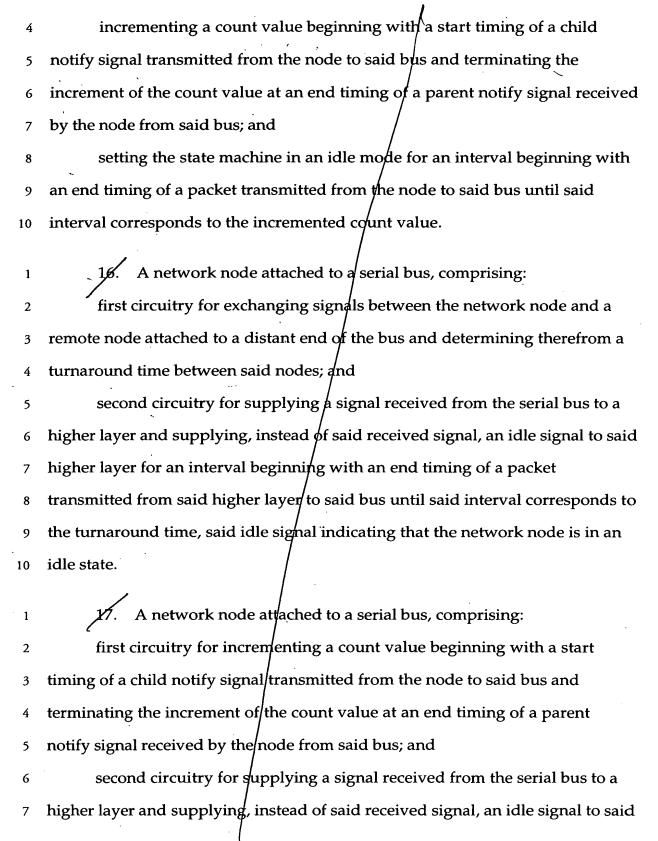
- is provided for converting a signal from said serial bus to a parallel signal and a
- 4 decoder for converting the parallel signal to said decoded signal.
- 1 6. The transceiver circuit of claim 5, characterised in that said serial
- 2 to parallel converter is connected to said serial/bus via an IEEE-1394 interface.
- 7. The transceiver circuit of claim 3, 4, 5 or 6, characterised in that
- 2 said control circuitry comprises:
- a start-of-child-notify detector for detecting the start timing of a child-
- 4 notify signal from said higher layer which is transmitted from the network
- 5 node to a child node as a response to a signal from the child node;
- an end-of-parent-notify detector for detecting the end timing of a
- 7 parent-notify signal received from sald child node;
- 8 first counter circuitry for incrementing a first count value in response to
- 9 the detection of the start timing of said child-notify signal by the start-of-child-
- notify detector until said end-of-parent-notify detector detects the end timing
- of said parent-notify signal; and
- comparator circuitry for comparing said first count value with a second
- count value which corresponds to said predefined time interval and controlling
- said selector circuitry according to relative values of said first count value to
- 15 said second count value.
- 1 8. The transceiver circuit of claim 7, characterised in that said
- 2 comparator circuitry comprises:
- an end-of-data-end detector for detecting the end timing of a data-end
- 4 signal transmitted from said higher layer to said transmission medium; and
- second counter dircuitry for incrementing a second count value in



- 7 of-data-end detector until the second count value/equals the incremented first
- 8 count value and controlling said selector circuitry for supplying said idle signal
- 9 to said higher layer for an interval during which said second counter circuitry
- 10 continues to increment said second count value.
- 9. A communication system formed by a plurality of nodes
- 2 interconnected by transmission lines, characterised in that each of said nodes
- includes the transceiver circuit as claimed/in any one of claims 1-to-8.
- 1 10. A communication method for a network node for converting a
- 2 signal received from a transmission medium to a decoded signal that can be
- 3 recognised by a higher layer and transmitting packets received from said
- 4 higher layer to said transmission medium, characterised by the steps of:
- supplying, instead of said $dec\phi ded$ signal, an idle signal to said higher
- 6 layer for a predefined time interval which starts at the end timing of a packet
- 7 transmitted from said higher layer to said transmission medium, said idle
- 8 signal indicating that the network/node is in an idle state; and
- supplying the decoded signal to said higher layer, instead of said idle
- signal, at the end timing of said predefined time interval.
- 1 11. The method of claim 10, characterised in that said predefined time
- 2 interval is equal to a turnaround time between said network node and a node
- 3 connected to a distant end of said transmission medium.
- 1 12. A recording medium for recording a control program for describing
- 2 the operation of a network node which converts a signal received from a



- 3 transmission medium to a decoded signal that can be recognised by a higher
- 4 layer and transmits packets received from said higher layer to said
- transmission medium, characterised in that said control program contains the
- 6 steps of: supplying, instead of said decoded signal, an idle signal to said higher
- 7 layer for a predefined time interval which starts at the end timing of a packet
- 8 transmitted from said higher layer to said transmission medium, said idle
- 9 signal indicating that the network node is in an idle state; and supplying the
- decoded signal to said higher layer, instead of said idle signal, at the end timing
- of said predefined time interval.
- 1 13. The recording medium of claim 12, characterised in that said
- 2 predefined time interval is equal to a turnaround time between said network
- 3 node and a node connected to a distant end of said transmission medium.
- 1 A communication method for a network node attached to a serial
- 2 bus, the method comprising the steps of:
- setting a state machine in a receive mode;
- exchanging signals between the network node and a remote node
- 5 attached to a distant end of the bus and determining therefrom a turnaround
- 6 time between said nodes; and
- setting the state machine in an idle mode for an interval beginning with
- 8 an end timing of a packet transmitted from the node to said bus until said
- 9 interval corresponds to the turnaround time.
- 1 15. A communication method for a network node attached to a serial
- 2 bus, the method comprising the steps of:
- 3 setting a state machine in a receive mode;



- 8 higher layer for an interval beginning with an end timing of a packet
- 9 transmitted from said higher layer to said bus until said interval corresponds to
- the turnaround time, said idle signal indicating that the network node is in an
- 11 idle state.

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